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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:  
Russell J. Apfel

Serial No.: 09/778,291

Filed: February 6, 2001

For: METHOD AND APPARATUS FOR  
IMPROVING GAIN BANDWIDTH  
PATHS

Group Art Unit: 2665

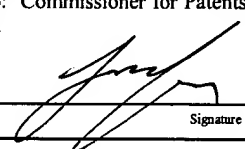
Examiner: DANIEL J. RYMAN

Atty. Dkt. No.: 2069.008800/TT3778

CUSTOMER NO. 23720

**REPLY BRIEF**

**MAIL STOP APPEAL  
BRIEF - PATENTS**  
Commissioner for Patents  
P.O. Box 1450  
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CERTIFICATE OF MAILING UNDER 37 C.F.R. § 1.8	
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Sir:

Appellant files this Reply Brief in response to the Examiner's Answer dated February 8, 2006. The statutory response date is two months from the date of the Examiner's Answer dated February 8, 2006, therefore, it is due Monday, April 10, 2006 (since April 8, 2006 falls on a Saturday). Since this Reply Brief is being filed on Monday, April 10, 2006, it is timely filed.

No fee is believed to be due in connection with the filing of this document. However, should any fee under 37 C.F.R. §§ 1.16 to 1.21 be deemed necessary for any reason relating to

this document, the Commissioner is hereby authorized to deduct said fee from Legerity Inc., Deposit Account No. 50-1591/TT3778.<sup>1</sup>

### **ARGUMENT**

In the Examiner's Answer dated February 8, 2006, the Examiner seems to again misconstrue the disclosure of U.S. Patent 6,870,888 (*Shapiro*). As submitted by the Examiner, *Shapiro* clearly does not disclose determining a bandwidth requirement of a signal path. The Examiner continues to mischaracterize *Shapiro* to assert that it discloses or makes obvious the subject matter of determining the bandwidth of a signal path in the context of the claims as a whole. See, page 11 of the Examiner's Answer dated February 8, 2006. The support that the Examiner uses for this allegation is a disclosure in *Shapiro* that relates to allocating different channels in the upstream and downstream directions by defining for each channel a maximum bit allocation and gain (citing column 7, lines 36-55 and column 8, lines 16-34 of *Shapiro*). Appellant respectfully submits that defining a maximum bit allocation and the gain for a channel is simply not equivalent to, nor does it make obvious, determining the bandwidth of the channel.

Performing the gain/bandwidth control process called for by claim 1 of the present invention clearly requires a requirement of determining a bandwidth requirement of a signal path and controlling the gain based upon this determination. *Shapiro* simply does not disclose determining the bandwidth and controlling the gain. *Shapiro* merely discloses a maximum bit allocation for any particular channel. The bandwidth of that channel could be any number of data capability. *Shapiro* is merely directed to providing a maximum bit allocation, which is subject matter that is simply misconstrued by the Examiner to argue that this is a 412

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<sup>1</sup> In the event the monies in that account are insufficient, the Director is authorized to withdraw funds from

determining a bandwidth. In contrast, it is clear that the controlling of the gain is based upon determining a bandwidth requirement of a signal path, which is clearly not suggested or made obvious by *Shapiro*. *Shapiro* is simply directed to assigning a maximum bit allocation and a gain. There is nothing in *Shapiro* that would even remotely suggest that *Shapiro* relates to controlling a gain based upon determining a bandwidth requirement. *Shapiro* does not disclose or suggest determining a bandwidth requirement. The Examiner misconstrues the maximum bit allocation and gain assigned to a channel and mischaracterizes this disclosure to argue obviousness of the concept of controlling a gain based upon determining a bandwidth requirement or a signal path, as called for by claim 1 of the present invention. Therefore, the Examiner is clearly misguided in asserting obviousness of the subject matter which is clearly not made obvious by *Shapiro* and as admitted by the Examiner is not made obvious by U.S. Patent 6,507,606 (*Shenoi*). Allocating the maximum number of bits is clearly not subject matter that would make obvious determining a bandwidth requirement of a particular path and adjusting the gain portion based upon such determination, as called for by claims of the present invention. Therefore, the Examiner's arguments are based on false premises and therefore, the obviousness rejection is invalid.

Further, on page 12 of the Reply Brief, the Examiner utilizes a Webster's Collegiate Dictionary definition of "monitor" and defines it as "to keep watch and keep track of". Appellant respectfully asserts that, in light of the *Phillips* case, the subject matter should be taken in context of the disclosure of the claims and the specification. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed.Cir. 2005). The ruling in the *Phillips* case stresses that claim language should be viewed "in the context of the particular claim..." 415 F.3d at 1313. Contrary to this

notion, the Examiner inappropriately utilized external documents to construe or characterize various terms of the claims in an attempt to use the extraneous language, (*i.e.*, “keeps track of”), to the disclosure of *Shenoi*. This is incorrect methodology in trying to argue obviousness of a claim. Further, monitoring a signal is not the only limitation of the claims. The combination of *Shenoi* and *Shapiro* clearly does not disclose performing the gain/bandwidth control process called for by claims of the present invention.

In the Examiner’s Answer dated February 8, 2006 (*see* pages 14-15), the Examiner argued that, upon a reading of *Shenoi* and *Shapiro*, those skilled in the art would find motivation to combine them to make obvious all of the elements of the claims of the present invention. Notwithstanding the fact that the combination of *Shenoi* and *Shapiro* clearly does not disclose or make obvious all of the elements of the claims of the present invention. Simply because there is discussion of downstream and upstream frequency in *Shenoi*, and *Shapiro* discloses a DSL system, those skilled in the art would not be motivated to combine those two disclosures and find all of the elements of claims of the present invention obvious. This is clearly hindsight reasoning. If the Examiner’s assertions were followed, then any slightly related or unrelated art remotely touching the subject matter of data transmission would be combinable to make obvious all of the elements of claims of the present invention. This is clearly improper hindsight reasoning. *Shapiro* merely relates to bit allocation among carriers in a multi-carrier communication. *Shapiro* is directed to listing channels and the respective number of bits to be loaded onto the channels in a gain for each of the channels. In contrast, *Shenoi* is directed to the ADSL line communications and providing gain sufficient to provide communication over long subscriber loops. Appellant respectfully asserts that without improper hindsight reasoning, those skilled in the art would not have combined *Shapiro* and *Shenoi* since the requisite motivation is

not found in the prior art or known to those skilled in the art at the time of the invention of the present invention.

The Examiner again argues (on pages 16 and 17 of the Examiner's Answer dated February 8, 2006) that *Shenoi* and *Shapiro* would be combined to disclose separating a signal path in response to approximate length of the signal path and the bandwidth requirement. Firstly, as described herein, *Shenoi*, *Shapiro*, or their combination, clearly do not disclose determining the bandwidth requirement. Further, the combination does not disclose or make obvious separating a signal path. The Examiner merely asserts that *Shapiro* teaches separating signal paths because it allocates maximum number of bits for a particular channel. This is clearly a mischaracterization of *Shapiro* since merely allocating a maximum number of bits does not make obvious the concept of separating the signal paths, as described in further details below. See, Examiner's argument in page 14 and pages 16-17 of the Reply Brief.


Simply because *Shenoi* discloses providing higher gain for higher frequency and the fact the Examiner alleges that *Shapiro* discloses separating a signal path, still does not provide sufficient arguments or evidence to make obvious the element of separating a signal path in response to approximate length of the signal path and the bandwidth requirement. Clearly, neither one of the cited prior art references discloses determining the bandwidth, they merely disclose assigning maximum number of bits. Further, there is no indication of separating the signal path, as called for by claims of the present invention. Therefore, the Examiner's arguments on pages 16 and 17 are also not supported by the evidence. Hence, the Examiner's assertions in the Reply Brief is erroneous and does not lend support to the Examiner's rejections of any of the claims of the present invention. Accordingly, Appellant respectfully submits that the Examiner's arguments are erroneous.

Further, in light of the various, detailed arguments provided in Appeal Brief, which are hereby incorporated by reference, the Examiner's rejections are erroneous and should be overturned. Accordingly, Appellant respectfully requests that the Board overturn the rejections placed forward by the Examiner.

In view of the foregoing, it is respectfully submitted that the Examiner erred in not allowing all claims (claims 1-25) pending in the present application over the prior art of record. The undersigned attorney may be contacted at (713) 934-4069 with respect to any questions, comments, or suggestions relating to this appeal

Respectfully submitted,

Date: April 10, 2006



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